

Title (en)

Controlling apparatus for high frequency high voltage power source.

Title (de)

Steuergerät für eine Hochfrequente Hochspannungsleistungsquelle.

Title (fr)

Dispositif de contrôle pour une source de puissance à haute fréquence et haute tension.

Publication

EP 0595232 A2 19940504 (EN)

Application

EP 93117258 A 19931025

Priority

JP 30982392 A 19921026

Abstract (en)

A controlling apparatus for a high frequency high voltage power source is disclosed which eliminates a switching loss of a high frequency inverter and allows adjustment of the output power to be performed continuously and accurately over a wide range. A resonance current of a resonance circuit of the high frequency high voltage power source is detected by current detection means (13), and a phase locked loop circuit (15) locks itself with a frequency with which it coincides in phase with the resonance current to produce a synchronized pulse signal. From the pulse signal, a signal having a zero voltage outputting period of a preset duration is formed by a pulse density modulation circuit (16) to change the pattern of a gate signal for switching semiconductor elements (9a, 9b, 9c, 9d) of a high frequency inverter (6) to adjust the output power. An input voltage before a zero voltage outputting period is entered is stored into voltage storage means such as a sample and hold circuit (28) so that the phase locked loop circuit (15) may continue to lock with the same frequency also during the zero voltage outputting period. <IMAGE>

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IPC 8 full level

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CPC (source: EP KR US)

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Cited by

EP0925837A3; EP0902531A1; US5963436A; EP0884829A1; US6026005A; KR100647848B1; EP0979704A3; WO0147097A1; WO03098790A1; US10199950B1; US10594223B1; US11075583B1; US11705820B2

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